

Serial No. 09/445,131

Attorney Docket No. RCA 88,670

REMARKS/ARGUMENTS

The Advisory Action mailed December 27, 2004 has been received and carefully considered. Claims 1, 3-6, 8-13, 15, and 19-23 are pending in the application. Claims 19-20 have been indicated to be allowable subject matter.

Rejection of Claims 1, 3-6, 8-13, 15, and 21-23 under 35 USC § 103(a)

Claims 1, 3-6, 8-13, 15, and 21-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Satoh et al. (U.S. Patent No. 5,764,620) in view of Gotoh et al. (U.S. Patent No. 6,052,465).

The present invention provides for a recording medium having a first and a second side. Each of the two sides includes program data. A first area on the first side and a second area on the second side of the medium have distinctive laser encoded data representing information identifying the respective program data. The first area and the second area are disposed between the center of the recording medium and an outer circumference. The program data is disposed outside the outer circumference. The first area and the second area occupy non-overlapping positions with respect to each other.

The individualized encoded data is associated with respective program data on a recording medium. In particular, the invention provides for the encoded data to be disposed on a specific portion of the recording medium that is distinct from the area in which the program data is stored. In the exemplary embodiment, the recording medium comprises a DVD disk having a Burst Cutting Area (BCA) for storing the individualized encoded data. The BCA is specified to be between a selected inner circumference and a selected outer circumference from the center of the disc (page 4, lines 7-14).

The current DVD specifications do not teach that multiple laser-encoded areas (BCAs) may be included on a single disk, that a BCA may be applied to a dual sided disk, or that each layer or each side of a recording medium may have a unique BCA. The present claimed invention recognizes that it is desirable to be able to provide

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multiple laser-encoded areas on a single disk, in particular, a respective laser-encoded area having selectively distinctive information for each side and/or layer of a recording medium (page 5, lines 7-19). The present claimed invention further recognizes that the laser cutting process used to form the BCA may cause potential defects if more than one BCA is used on a disk and the different BCAs overlap each other (page 6, lines 1-12).

To overcome the above, the present invention teaches multiple BCAs that are disposed in non-overlapping areas. The invention also teaches placing the multiple BCAs in the same location as that currently specified in the DVD specification. The advantage of having the respective BCA for each layer at the same location as currently specified in the DVD specifications is that no hardware modification is needed for a present DVD player to be able to read the individualized code encoded in the respective BCA area (page 8, lines 11-23).

In contrast, Satoh et al. teach a multi-layered optical disk comprising a plurality of recording layers accumulated in the thickness direction wherein a light beam is focused on one of the tracks of one of the layers thereby to record and reproduce data, the optical disk being characterized in that recording layers each have an identification section storing an address of the recording layer to which the identification section belongs. Satoh et al. further describe each layer as having an identification consisting of SYNC for synchronizing clocks, an address mark (AM), a track address (TA), a sector address (SA) and a recording layer address (LA). "Each track is divided into a plurality of sectors S, each of which has an identification section (referred to as ID<sub>a</sub> for the track 6a and as ID<sub>b</sub> for the track 6b) and a data field DF for storing data." Furthermore, Satoh et al. are concerned with single-sided medium. Satoh et al. neither disclose nor suggest a recording medium comprising "a first area on said first side and a second area on said second side of said medium, each said area having disposed thereon distinctive laser encoded data representing information identifying said respective program data, said first area and said second area being disposed between the center of the recording medium and an outer circumference, said respective program data being disposed outside the outer circumference, and said first area and said second area occupying non-

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overlapping positions with respect to each other" as claimed in claim 1 of the present invention. The present claimed invention differs from Satoh et al. in that it teaches a first area and a second area disposed between the center of the recording medium and an outer circumference, whereas Satoh et al. teach a multi-layered optical disk that includes a plurality of recording layers accumulated in thickness, not between the center of the recording medium and an outer circumference. Additionally, the identification section and the data fields of Satoh et al. are both in the pit or data area, as opposed to the area between the center of the recording medium and the outer circumference as described in the present claimed invention.

The Examiner states that the term "multiple BCA areas" as argued in the previous response is not recited in claims 1, 3-6, 8-11, and 21-23. The applicant respectfully submits that "said first area and said second area being disposed between the center of the recording medium and an outer circumference" as stated in claim 1 of the present invention represents a first BCA area and a second BCA area, respectively. Claim 1 also states that "said first area and said second area occupying non-overlapping positions with respect to each other," further providing evidence for multiple BCA areas.

Gotoh et al. teach an optical disk barcode forming method. Position information for piracy prevention, which is a form of ID, is coded as a barcode and recorded by laser trimming on a reflective film in a PCA area of an optical disk. When playing back the thus manufactured optical disk on a reproduction apparatus, the barcode data can be played back using the same optical pickup. Gotoh et al. further note that the data may be stored on the disk with constant linear velocity (CL V), while the stripes are stored with constant angular velocity (CA V) (col. 22, lines 37- 42). As such an apparatus for playing back the disk must switch between the two rotational control modes (col. 22, lines 37-42). To improve the playback, Gotoh et al. provide for a PCA stripe presence/absence identifier recorded as a pit signal (col. 3, lines 49 - 52). The apparatus switches between the modes in response to the identifier to quickly switch to the correct rotational control mode. Gotoh et al. solve an entirely different problem, namely providing efficient switching between two rotational control modes depending on

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whether the stripe information is included on the disk, and provides an entirely  
distinguishable solution, namely, providing an identifier that allows an apparatus to  
efficiently select the rotational control mode. There is a guard band between the  
constant angular velocity (CA V) stripes where the identification information is  
recorded and the constant linear velocity (CL V) area where data is recorded. The use of  
a guard band does not put the CA V stripes in an area disposed between the center of  
the recording medium and an outer circumference.

Gotoh et al., similarly to Satoh et al., neither disclose nor suggest "a first area on said first side and a second area on said second side of said medium, each said area having disposed thereon distinctive laser encoded data representing information identifying said respective program data, said first area and said second area being disposed between the center of the recording medium and an outer circumference, said respective program data being disposed outside the outer circumference, and said first area and said second area occupying non-overlapping positions with respect to each other" as claimed in claim 1 of the present invention. Gotoh et al. convert data into a barcode and records it in a pit area in overwriting fashion, thereby permitting the use of a single optical pickup to read both the bit data and barcode data. Gotoh et al., however, do not provide for multiple laser-encoded areas on a single disk and especially not in non-overlapping areas. Additionally Gotoh et al. teach that after a first set of stripes is recorded, a calculation is made in order to determine if space is available for a subsequent set of stripes within the 360 degrees area in order not to overwrite the first set of stripes. Thus, there is only one identification area that may have multiples sets of stripes, and only if there is room within the 360 degrees of the identification area. Consequently, Gotoh et al. do not overcome the deficiencies of Satoh et al. not having multiple BCA areas.

In light of the above remarks, it is respectfully submitted that claim 1 is patentable over Satoh et al. in view of Gotoh et al. Independent claims 6, 15 and 21-23 each recite similar features to those discussed above with respect to claim 1 and thus it is respectfully submitted that these claims are likewise patentable over Satoh et al. and Gotoh et al., when taken alone or in combination. Additionally, claims 3-5 and 13 are

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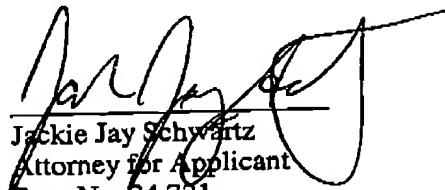
dependent on claim 1 and claims 8-12 are dependent on claim 6. It is, therefore, respectfully submitted that Claims 3-5, and 8-13 are also patentable over Satoh et al. in and Gotoh et al. when taken alone or in combination.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at (609) 734-6440, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due with this response. However, if a fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,  
Jianlei Xie

By: Jackie Jay Schwartz  
Attorney for Applicant  
Reg. No. 34,721  
Phone (609) 734-6866



Patent Operations  
Thomson Licensing, Inc.  
P.O. Box 5312  
Princeton, New Jersey 08543-5312  
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